



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/579,047

05/11/2006

Hidehiro Toyoda

G&P-5304

6271

86636 7590 06/26/2009  
BRUNDIDGE & STANGER, P.C.  
1700 DIAGONAL ROAD, SUITE 330  
ALEXANDRIA, VA 22314

EXAMINER

ABRAHAM, ESAW T

ART UNIT

PAPER NUMBER

2112

MAIL DATE

DELIVERY MODE

06/26/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/579,047	<b>Applicant(s)</b> TOYODA, HIDEHIRO	
	<b>Examiner</b> ESAW T. ABRAHAM	<b>Art Unit</b> 2112	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 March 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***DETAILED ACTION***

***Response to Amendment***

- The reply filed March, 24 2009, has been received and entered. Claims 1-6 are pending.
- In view of the amendment filed on 03/24/09, the examiner withdraws the objection to the title.
- In view of the amendment filed on 03/24/09, the examiner withdraws the objection to the Abstract.
- Applicant's amendment to claim 1 appropriately addresses to objection to claim 1.

Accordingly, this objection is withdrawn in view of Applicant's amendment.

- Applicants' arguments have been considered but are moot in view of the new ground(s) of rejection under 35 USC 112 which are necessitated by the amendment. The Examiner would like to point out that this action is made final (See MPEP 706.07a). The prior art rejection will remain until and unless a clear understanding is made of the claims. Furthermore, if Applicants believe an interview will be useful in understanding the Examiner's position, then they are welcome to contact the Examiner.

***Status of Claims***

1. Claims 1-6 remain pending.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the original specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

For example, the current amendment to the claims includes “wherein the first link group, the second link group, and **the third link group** are each different from each other” that were not present in the original specification and therefore is constituted as new matter.

The examiner would like to point out that, Specification, page 5 lines 6-14 **only** teaches “**a parity** (hereinafter, parity data) **of each data link** is calculated and transmitted by using a **different link** (hereinafter, parity link) **from the data link**. Furthermore, in the data link and parity link, an error check bit for transmitting data is calculated and both are transmitted”

***Claim Rejections - 35 USC § 112, 2<sup>nd</sup>***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1 (as amended): states, "... wherein the first link group, the second link group, and the third link group are each different from each other..."

The term "different" is a relative term and it is unclear how the links differ from each other. Clarification is required.

Claims 2-6 depend from claim 1 and therefore are rejected as well.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims **1-6** are rejected under 35 U.S.C. 102(b) as being anticipated by Sakamoto et al. (U.S. PN: 6,557,110) "hereinafter as Sakamoto".

**As per claim 1:**

Sakamoto substantially teaches a data transmission method for transmitting data through a transmission line that is integrated with a plurality of links including a first link group, a second link group, and a third link group, the method comprising transmitting information data through the first link group that comprises at least one link included in the plurality of links (see col. 45-65); transmitting parity data generated from the information data through the second link group that comprises at least one link included in the plurality of links that is different from the first

Art Unit: 2112

link group (see col. 6, lines 5-50 and col. 7, lines 31-67); and transmitting error check data generated from the information data and the parity data, which is used for an the error correction when an error occurs in the information data or the parity data, through the third link group that comprises at least one link included in the plurality of links that is different from the first link group and the second link group (see col. 8, lines 18-53).

**As per claim 2:**

Sakamoto in view of the above rejection teaches compensating a difference of arrival time between at least two among the information data, the parity data and the error check data, when the difference of arrival time occurs; and establishing a synchronization of the information data, the parity data and the error check data (see col. 8, lines 53-64).

**As per claim 3:**

Sakamoto in view of the above rejection teaches compensating, when the error correction of the information data or the parity data is performed by using the error check data, the difference of arrival time of the information data, the parity data and the error check data to detect the difference of arrival time, in which the error correction does not continuously occur; and establishing a synchronization of the information data, the parity data and the error check data, using the detected difference of arrival time (see col. 8, lines 53-64)..

**As per claim 4:**

Sakamoto in view of the above rejection teaches judging whether the lost of information data occurs in at least one link included in the first link group, based on the result of comparison

Art Unit: 2112

of the information data and the parity data; calculating an error rate from the data transmitted by the first link group, the data transmitted by the second link group, and the error check data transmitted by the third link group; and replacing, when a loss of the information data occurs, the lost information data with the information data reproduced from the parity data, based on the result of a comparison of the error rate and a predetermined value (see col. 8, lines 53-67 to col. 9, lines 1-48, col. 24, lines 56-63 and col. 25, lines 5-14).

**As per claim 5:**

Sakamoto in view of the above rejection teaches calculating an error ratio and an error ratio variation per unit time from the data transmitted by the first link group, the data transmitted by the second link group and the error check data transmitted by the third link group; and replacing the data transmitted by the first link group with the information data reproduced from the parity data when the error rate variation per unit time abruptly increases beyond a predetermined value (see col. 8, lines 53-67 to col. 9, lines 1-48).

**As per claim 6:**

Sakamoto in view of the above rejection teaches generating the information data from a plurality of parallel signals that are composed of a bit string including a plurality of bits; generating the parity data from a signal that is composed of a parity calculated from the bit string; generating the error check data from at least one check signal that is composed of a check bit string generated by using an error correction code obtained from the bit string and the parity; transforming the generated information data, the generated parity data and the generated error check data into a plurality of serial signals; transmitting each of the plurality of serial signals

Art Unit: 2112

through the first link group the second link group and the third link group (see col. 6, lines 5-50, col. 7, lines 31-67 and col. 8, lines 53-67 to col. 9, lines 1-48); receiving the transmitted plurality of serial signals; converting the received plurality of serial signals into information data, the parity data and the error check data; detecting the error of the information data and the parity data by using the check bit string included in the error check data; and correcting the error of the information data by using the check bit string when an error is detected in the information data, and correcting the error of the parity data by using the check bit string when an error is detected in the parity data (see col. 23, lines 1-58 and col. 25, lines 14-28).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Conclusion***



Art Unit: 2112

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Esaw T. Abraham whose telephone number is (571) 272-3812.

The examiner can normally be reached on M-F 8am-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Esaw Abraham/  
Primary Examiner, Art Unit 2112